Family processes or structure? Examining influences on risk for adolescent externalizing problem behaviors

Shannon M. Savell

Virginia

Bachelor of Arts in Psychology, University of Virginia, May 2015

A Thesis presented to the Graduate Faculty of the University of Virginia
in Candidacy for the Degree of Master of Arts

Department of Psychology

University of Virginia

December, 2019 **will be Conferred**

Melvin Wilson, PhD

Robert Emery, PhD

Abstract

Family context is considered one of the most influential environments for child development (Bronfenbrenner, 1979; Bronfenbrenner, 1986). Structure and processes, both facets of the family context, influence children's behavior and development in different ways. The objective of the current studies was to thoroughly investigate the role of family structure and family processes in risk for externalizing problem behaviors from toddlerhood through adolescence. In a large longitudinal study of low-income families from diverse racial and ethnic backgrounds, we found that across a variety of modern family structure types, there were no significant differences in child behavior. However, when collapsing across family structure type, higher parent-child relationship quality, characterized by warmth, support and communication, was significantly related to lower levels of adolescent externalizing problem behavior. To further examine the impact of family processes on adolescent behavior, three mediation analyses were conducted. We found that primary caregiver depressive symptoms mediated the association between caregiver romantic satisfaction and adolescent externalizing problem behavior. Parent-child relationship quality also mediated the association between caregiver romantic satisfaction and adolescent behavior. However, positive parenting practices only partially mediated the association between romantic satisfaction and adolescent behavior. The results indicate that family processes may be more impactful than family structure on risk for adolescent problem behaviors suggesting that the quality of the caregiver-child relationship and caregiver-caregiver relationship may be more important than who the caregivers are across time. The findings highlight the need for prevention and intervention techniques to foster healthy family processes to reduce risk for adolescent problem behaviors.

Keywords: family structure, family process, adolescent externalizing problem behavior, longitudinal

Family processes or structure? Examining influences on risk for adolescent externalizing problem behaviors

Bronfenbrenner's ecological systems theory highlights the importance of family context on child behavior and development as a microsystem level influence (Bronfenbrenner, 1979). The family context is considered one of the most influential environments for child development (Bronfenbrenner, 1979; Bronfenbrenner, 1986). Structure and processes, both facets of the family context, influence children's behavior and development in different ways. Traditionally in the literature, research on the impact of family structure (i.e., members of the family living in the home and contributing to child-rearing) on child behavior has been done by comparing children's behavior in different types of family structure (e.g., married biological parents versus single parent families) (Demo & Acock, 1996). A developing area of the literature that has stemmed from findings on the impact of divorce on children is investigating the importance of the construct of family *process* rather than family *structure* on child behavior outcomes (Demo & Acock, 1996; Emery, 1982; Manning & Lamb, 2003). Family processes include: parent-child relationship quality, caregiver romantic satisfaction and parent-parent relationship functioning, parenting practices, and parent mental health (Bronfenbrenner, 1986; Walsh, 1982). The objective of the current studies was to thoroughly investigate the role of family structure and family processes in the development of externalizing problem behaviors from toddlerhood through adolescence.

One important family process that has been highlighted in the literature is developing a positive parent-child relationship. A strong parent-child relationship is associated with a myriad of positive outcomes for children (Sarsour et al., 2011). For example, children with a positive parent-child relationship are more likely to have positive peer relationships (Clark & Ladd, 2000) and social outcomes in school (Ketsetzis, Ryan, & Adams, 1998). Additionally, parent support

and relationship quality are associated with high levels of academic achievement (Morrison, Rimm-Kauffman, & Pianta, 2003) and academic motivation (Nuttall & Nuttall, 1976).

Further, positive parenting strategies, such as positive parent-child relationship quality, have been found to be strong predictors of resilience among children who have been exposed to adverse environments (O'Donnell, Schwab–Stone, & Muyeed, 2002; Savell, Womack, Wilson, Shaw, & Dishion, 2018) and high levels of life stress (Quamma & Greenberg, 1994). Specifically, Savell and colleagues (2018) found that even in the context of frequent experiences of racial and socioeconomic discrimination by target children's caregivers, children with a positive parent-child relationship, characterized by warmth, support and communication, were less likely to exhibit disruptive problem behaviors in adolescence. Similarly, positive parent-child relationship quality and parent support have been found to buffer the relationship between exposure to community violence and problematic externalizing behaviors (Sullivan, Kung, & Farrell, 2004), such that children with a strong parent-child relationship exhibit fewer problem behaviors even in the context of exposure to high levels of community violence.

In addition to the parent-child relationship quality, the process of maintaining positive parent-parent relationship functioning is an important factor in healthy child development (Cummings, 1994; Easterbrooks, & Emde, 1988; Howes & Markman, 1989). Parental romantic relationship satisfaction and conflict have been linked to child mental health (Strohschein, 2005), social outcomes (Gottman & Katz, 1989) and academic outcomes (Demo & Acock, 1996). Further, children's exposure to parental conflict has been shown to increase risk for externalizing problem behavior (Jenkins, Simpson, Dunn, Rasbash, & O'Connor, 2005; Shaw, 1991). Similar to parent-parent functioning and the quality of parental romantic relationship, single parents' romantic satisfaction in their dating relationships is related to their children's adjustment such that as dissatisfaction rises so do child problem behaviors (Montgomery & Anderson, 1992).

However, there is substantially less work devoted to the study of single parents' dating satisfaction and family functioning.

Not only is it important for the parent-parent relationship to function well but the parenting practices they engage in are also uniquely important for children's healthy psychosocial development (Farrell & White, 1998; Griffin, Botvin, Scheier, Diaz, & Miller, 2000; Martinez & Forgatch, 2002). In a study by Schoppe-Sullivan and colleagues (2007), structural equation models indicated multiple dimensions of parenting mediated relations between marital conflict and children's adjustment. There are a number of theories for how parenting practices may be the mechanism by which marital functioning and child development are related such as modeling and more direct effects. For example, Krishnakumar and colleagues (2003) suggest that perceived interparental conflict has the potential of serving as a model for conflictual behaviors incorrectly assumed to be appropriate by the children. Conflict experienced between partners may also have the ability of "spilling over" into several parenting dimensions that are then able to influence children's internalizing and externalizing problems (Benson, Buehler, & Gerard, 2008). Further, marital conflict may negatively influence children's feelings of security in relationship with their parents and may contribute to children's symptoms of psychological distress (Harold, Shelton, Goeke-Morey, & Cummings, 2004).

Additionally, parent mental health has long been established as an influential factor in healthy child development (Cummings, Keller & Davies, 2005; Goodman & Gotlib, 1999; Goodman et al., 2011). In a study by Fishman and Meyers (2000), marital satisfaction was significantly related to both mother and father depressive symptoms and to child psychological adjustment in early to middle childhood. Further, Henderson and colleagues (2003) found that mothers with depressive symptoms reported lower levels of marital satisfaction and higher levels of problem behavior for their school aged sons. Although, Cummings et al., 2005, found that

marital relations mediated the relationship between maternal depression and child externalizing problem behaviors in early childhood, they also suggested there may be a bidirectional relationship between maternal depression and marital relations.

It is important to keep in mind that the family processes described above may have a bidirectional or reciprocal relationship such that changes in one family process may impact others. A similar pattern of reciprocal relationships may emerge for changes in family structure or relationship transitions, which have been associated with increased risk for problem behaviors (Demo et al., 1996; Goldberg & Carlson, 2014; Goodnight et al., 2013). Children's externalizing problem behavior can create additional parenting stress, which may cause tension in the parent-parent relationship leading to a change in family structure (e.g., divorce) (Goldberg et al., 2014). However, it is also possible that distress in the parent-parent relationship unrelated to child behavior (e.g., infidelity) may have spill-over effects into the parent-child relationship functioning (Benson et al., 2008; Griffin et al., 2000). Further, a depressed parent may be less motivated or lack the energy to engage in the positive parenting practices they would otherwise endorse, which could increase the risk for children's externalizing behavior as a means to gain attention from a withdrawn parent (Cummings et al., 2005). Conversely, children's externalizing problem behaviors may exacerbate parent's mental health problems, such that a parent already trying to manage anxiety or depressive symptoms becomes overly taxed by parenting distress. The reciprocal relationship may also function in a positive direction. For example, a parent seeking mental health treatment may experience symptom relief, which could benefit both the parent-parent relationship and the parent-child relationship. Overall, each facet of the family context has both unique and compound effects on the child's healthy psychosocial development.

To date, the current literature on family structure and family processes has a few limitations. First, it is mainly focused on family structures comprised of married biological

parents and their marital satisfaction; thus, it has neglected the context in which a substantial number of children are raised today (Amato, 2010). Less is known about child development longitudinally in modern types of family structure (e.g., a mother and grandmother as caregivers, cohabitating parents, same gender parents, single parents dating) (Amato, 2010). Second, a limitation to the vast majority of the previous literature on family structure and family processes is its focus on white middle-class families (Amato, 2002). The present studies sought to address the gaps in the literature by investigating types of family structure and caregiver romantic partnerships present in an ethnically and racially diverse sample of low-income families. Although we do not have reason to expect the patterns in the findings to be divergent from the previous literature in utilizing an ethnically and racially diverse sample of low-income families, it is important to investigate the relationships of family structure, family processes and child behavior in more inclusive samples of participants with the goal of diversifying the present scholarship. Third, few studies in the current literature have investigated the critical developmental shift from late childhood to adolescence (Schoppe-Sullivan, Schermerhorn, & Cummings, 2007), which may be a particularly influential time in the child's life for the impact of family structure and family processes on behavior. In order to address the gaps in the literature and thoroughly address the overall research question the following analyses were conducted as four discrete studies.

Study 1 – The Influence of Family Structure on Adolescent Behavior

Given the diversity in family structures present in American society today, it is important to interrogate assumptions about the impact on child behavior that varying types of family structures may have. A vast majority of the previous literature has compared children of married biological parents with those of divorced parents. Decades of research on the impact of divorce

on child behavior (for review, see Shaw, 1991) would lead one to assume there would be significant differences across different family structures in child adjustment. However, most of the previous literature has examined post-separation child well-being cross-sectionally. The present study investigated adolescent behavior across seven modern family structures in a large (*N*=538) ethnically and racially diverse sample of low-income families.

Although the divorce rate in the United States has declined since the 1980's, there has been an increase in the proportion of children born to unmarried, cohabiting parents (U.S. Census Bureau, 2001; Bianchi & Casper, 2000). Consequently, researchers need to extend previous work to incorporate the growing forms of modern family structure. Kellam and colleagues' (1977) seminal work found that children of single mothers as compared to mother/grandmother or mother/step-father parenting dyads were most at risk for behavioral problems in early childhood. However, few studies to date have assessed differences in adolescent behavior across such varying modern family structures throughout childhood and adolescence prospectively.

Furthermore, the studies that have examined family structure and child behavior cross-sectionally show contradictory results. Previous research suggests that there is a strong association between family structure and adolescent behavioral and health problems (Dunifon & Kowaleski-Jones, 2002; Magnuson & Berger, 2009). Dunifon and Kowaleski-Jones (2002) also assessed child well-being by measuring cognitive performance and behavioral problems. They found that child well-being was greater in a two-parent biological family structure compared to a cohabiting family structure. Similarly, Magnuson and Berger (2009) found that two-parent biological family structures had larger declines in behavioral problems over time than stable-single mother family structures. However, other studies have found no significant differences between children or adolescents in cohabiting families versus married families (Brown, 2004;

Morrison, 1998). Brown (2004) also explored beyond the simple dichotomy of family forms by investigating adolescent behavioral outcomes of single parents, two-biological parent cohabitation and step-parent cohabitation. The results suggested that there were no significant differences between children or adolescents in two-biological-parent cohabiting families versus cohabiting step-families (Brown, 2004).

One finding consistently shown in the current literature is that single parent family structure tends to be associated with the highest level of risk; however, a significant limitation to the findings may be that single parent households generally earn lower incomes compared with two-parent households (McLanahan, 1999) and parenting stress may be higher (Berryhill, 2016; Copeland & Harbaugh, 2005). As suggested by Brown (2004), a potential mediating variable for the increased risk associated with single parent family structure may be socioeconomic conditions that result from a dissolution of a relationship and change in the family structure. The current study utilized a sample of families that were similarly economically disadvantaged at recruitment and annual family income will be accounted for in the analyses.

In comparing the importance of the construct of family *process* rather than family *structure* on child behavior outcomes (Demo, & Acock, 1996; Manning, & Lamb, 2003), the present study sought, to first, address the impact of family structure on child behavior outcomes and, to second, interrogate whether *family structure or family process* has a greater impact on child behavior. One variable consistent with family process theory is the quality of the parent-child relationship. Thus, we assessed whether parent-child relationship quality during the target child's early through middle childhood varied across the identified family structures and whether parent-child relationship quality significantly predicted adolescent externalizing problem behavior.

In the present study, we compared children's externalizing problem behaviors over a 12 year period across seven modern family structures (e.g., families with changes in primary caregiver, families with the same caregivers that are in a romantic relationship, families with the same caregivers but they are not in a romantic relationship, families with the same primary caregiver but varying live-in partners, families with the same primary caregiver but varying non-romantic live-in caregivers, families with the same primary caregiver but varying live-in partners and live-in relatives, and families with the same primary caregiver and live-in grandparent but varying live-in romantic partners). In congruence with the current literature (Amato, 2010), we hypothesized that across the seven identified family structures adolescent behavior would differ.

Methods

Participants. The Early Steps Multisite Project has 731 participating families in the study. Caregiver–child dyads were initially recruited when the child was between 2 years 0 months and 2 years 11 months of age from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) in the metropolitan areas of Pittsburgh, PA and Eugene, OR, and the city of Charlottesville, VA, and surrounding counties (Dishion et al., 2008). The Primary Caregiver (PC) was the main adult provider of childcare, generally the mothers of target children (TCs). The PC also designated Alternate Caregivers (AC), who could be any significant adult that was recognized by the TC and PC and in most cases was the father figure. Inclusion criteria for recruitment included risk factors within the following three domains: (a) child behavior (e.g., conduct problems), (b) family problems (i.e., maternal depression, substance-use problems) and (c) sociodemographic risk (i.e., no more than 2 years' post-high-school education and low family income). The sample consisted of children who exhibited at least two out of the three risk factors. All children in the sample had above-normative levels of externalizing problems to increase parent's motivation for concern. Half of the sample was randomly assigned to the

intervention condition. For a detailed description of the Family Check-Up intervention, see Dishion et al., 2008.

Of the 731 families (49% female children), 272 (37%) were recruited in Pittsburgh, 271 (37%) in the Eugene site, and 188 (26%) in Charlottesville. Across sites, children were reported to belong to the following racial groups: 27.9% African American, 50.1% European American, 13.0% biracial, and 8.9% other races (e.g., American Indian, Native Hawaiian). In terms of ethnicity, 13.4% of the sample reported being Hispanic American. The current study utilized data from a subset of families that participated at ages 2, 3, 4, 5, 7, 8, 9.5, 10.5, and 14 (Waves 1, 2, 3, 4, 5, 6, 7, 8, and 9, respectively).

Measures

Demographic variables. A semistructured interview was administered at each assessment to the PC to assess demographic characteristics of the family, such as gender, race and ethnicity, household annual income, parent education, and household composition. For the present study, demographic information on gender, race and ethnicity, site location, and intervention status was collected at the age 2 assessment, and information on household annual income and parent education was collected at age 14. We coded seven different family structures based on the relationship between the target child and the adults living in the home as well as the relationship between the target child and the lists of live-in caregivers, which were assessed in the PC interview.

The seven family structures will be referred to as Family Composition 1-7. Family structures ranged from most consistent to least consistent presence of live-in family members. Family Composition 1 is characterized by having the same primary caregiver and the same alternative caregiver at all participating waves of the study and both caregivers were in a romantic relationship with one another (e.g., married biological parents of target child). Family

Composition 2 was characterized by having the same primary caregiver and alternative caregiver at all participating waves of the study and the caregivers were not in a romantic relationship with one another (e.g., biological mother of target child and biological grandmother of target child). Family Composition 3 was defined as having the same primary caregiver and grandparent living in the home as well as varying romantic partners of the primary caregiver that live in the target child's home (e.g., mother of target child, grandmother, and mother's romantic partner). Family Composition 4 was composed of the same primary caregiver and varying live in relatives of the primary caregiver but no live-in romantic partners (e.g., mother of target child and aunt of target child). Family Composition 5 was defined as having the same primary caregiver with varying live in romantic partners but no live-in relatives (e.g., target child's mother and the mother's romantic partner but no other relatives living in the home). Family Composition 6 was comprised of the same primary caregiver along with varying romantic partners and varying relatives of the primary caregiver (e.g., the mother of the target child and her romantic partner living in the target child's home along with the target child's grandmother). Family Composition 7 was characterized by having varying primary caregivers in the participating waves of the study (e.g., biological mother loses custody of the target child and grandmother becomes primary caregiver for subsequent waves of the study). Of the 731 families in the Early Steps Multisite project, we were able to code for family structure using the demographic data for 714 families. Seventeen families did not participate in the demographic interview in waves following the initial age 2 home visit and thus were not included in the current study.

Caregiver and teacher reports of adolescent externalizing problem behaviors. Caregiver assessments of adolescent externalizing problem behaviors were assessed using the Child Behavior Checklist (CBCL) at age 14. The CBCL is a 76-item parent-report of emotional and behavior problems in children over the past 6 months (Achenbach & Rescorla, 2001). A Likert

scale of 0 (not true), 1 (somewhat or sometimes true), and 2 (very true or often true) was used to assess parental perceptions of child behavior (e.g., "My child is inattentive or easily distracted."). A shorter version of the CBCL was given to the target children's teachers at age 14. An average of the caregiver and teacher scores on the CBCL were used in the present study.

Parent-child relationship quality. Primary caregivers completed the Adult Child Relationship Scale (ACRS) at the ages 2, 5, 9.5 and 10.5 assessment. The ACRS is a 15-item measure adapted from the Student-Teacher Relationship Scale (Pianta, Steinberg, & Rollins, 1995), which assesses the quality of the parent–child relationship and yields two scales: the Positive Relationship subscale and the Conflict Relationship subscale. To determine if a positive parent–child relationship was related to adolescent externalizing problem behavior, the PC's score on the five-item Positive Relationship subscale summed across the four waves was used in the present study. A sample item from the Positive Relationship subscale is "If upset, this child seeks comfort from me." Responses were on a Likert scale of 0 (*Definitely not*) to 4 (*Definitely*). The positive relationship subscale was reversed scored such that higher scores indicate a lower quality relationship characterized by fewer incidences of warmth, communication and support and lower scores indicate a higher quality relationship characterized by higher levels of warmth, communication and support.

Results

Descriptive statistics for each of the seven family structure types are reported in Tables 1 through 7 for categorical variables (e.g., TC gender, site location) and Tables 8 through 14 for continuous variables (e.g., annual family income).

In order to test our first research question of whether there were differences in adolescent externalizing problem behavior across the seven identified family structures we conducted an analysis of variance test (ANOVA). The results revealed no significant differences across the

seven family structures types for adolescent externalizing problem behavior when accounting for annual family income, primary caregiver education, target child gender, family contact with child protective services, site location of the family, and intervention status, $F(12,525) = 1.776$, $p = .102$. See Figure 1 for a depiction of the results.

In order to investigate whether family *structure* or family *process* was more impactful on adolescent externalizing problem behavior, we conducted an analysis of variance test (ANOVA) to determine whether there were differences in parent-child relationship quality across the seven identified family structures. Across the seven different family structure types, there were no significant differences in parent-child relationship quality, $F(12,412) = 1.171$, $p = .321$.

Therefore, we collapsed across the seven identified family structures and conducted a linear regression to determine whether parent-child relationship quality alone was related to adolescent externalizing problem behavior. The results revealed that parent-child relationship quality significantly predicted adolescent externalizing problem behavior, $R^2 = .032$, $F(1,426) = 13.89$, $p < .001$. For every one standardized unit increase in parent-child relationship quality scores, reverse scored such that high scores indicate lower quality relationship, there was a predicted .178 standardized unit increase in adolescent externalizing problem behavior. As quality of the parent-child relationship decreased (i.e., scores get higher) externalizing problem behaviors increased as well.

Discussion

The results of the present study suggest that there were no significant differences in adolescent externalizing problem behavior across seven modern family structure types in a sample of low-income families from diverse racial and ethnic backgrounds. Additionally, we examined whether family *structure* or family *process* was more impactful on adolescent externalizing problem behaviors. We analyzed whether there were differences in parent-child

relationship quality across the seven family structure types. The results suggest that across the seven family structure types there were no significant differences in parent-child relationship quality. However, when collapsed across family structure type, parent-child relationship quality significantly predicted adolescent externalizing problem behavior. Thus, regardless of the type of family structure, a positive parent-child relationship, characterized by warmth and communication, was associated with lower levels of adolescent externalizing problem behavior. The findings suggest that no matter who the caregiver is or whether there is a change in caregivers, the quality of the relationship between the caregiver and the child is significantly associated with adolescent behavior. Therefore, the results of the present study suggest parent-child relationship quality (i.e., family *process*) may be more important than the type of family *structure* in reducing risk for adolescent externalizing problem behaviors.

The results are important for conceptualizing the influence of family context on adolescent externalizing problem behaviors. Adolescence is a time of self-exploration and identity development (for an overview, see Côté, 2009) and a positive parent-child relationship has been shown to support the critical developmental process (Fuligni & Eccles, 1993). Additionally, the consequences of externalizing problem behaviors are exacerbated in adolescence, especially when they manifest in school contexts. Acting out or inability to concentrate can negatively impact adolescent well-being and academic outcomes (Ackard, Neumark-Sztainer, Story, & Perry, 2006). In adolescence, academic achievement is critical for educational attainment and has been shown to predict level of success in the transition to adulthood (Deary, Strand, Smith, & Fernandes, 2007). Thus, understanding variables that decrease risk for problem behaviors are essential and highlight the need for prevention and intervention techniques that promote family support and positive parent-child relationship quality.

The present study extended prior research by longitudinally investigating adolescent externalizing problem behavior across seven diverse family structures. A majority of the extant literature has focused on cross-sectional research or a shorter time period. Thus, by investigating over a 12-year period, the present study offered a thorough investigation from toddlerhood through early adolescence. The previous literature also primarily involved studies with three family structures types: two biological parents, cohabiting parents, and stepfamilies (Brown, 2004). Our study expanded prior research by including more modern family structures, which allows for more inclusivity for the types of family structures that extend beyond biological/step parents and are more representative of families in American society today. The sample itself is large and representative of low-income families from diverse racial and ethnic backgrounds (Dishion et al., 2008). Whereas most of the prior work concerning adolescent externalizing problem behavior across different family structures focused on middle to upper class White families (Amato, 2010).

The Early Steps Multisite project also collected information on family processes, such as the parent-child relationship, allowing us to investigate whether family *structure* or family *process* was more impactful on adolescent externalizing problem behavior. The previous literature emphasized the role of family structure and family processes independent from one another for adolescent behavior and typically were examined separately. Few studies have concurrently investigated the two constructs, family structure and family process, and how they may amalgamate to influence adolescent externalizing problem behavior (Schoppe, Mangelsdorf, & Frosch, 2001).

However, there were a few limitations to the present study that should be considered. In interpreting the findings, we recognized there was potential bias in the reporting of relationship quality, given the primary caregiver was the sole reporter. We focused only on primary

caregiver's perception of relationship quality. There were many variables that could affect a primary caregiver's perception including their frame of reference, amount of interaction, knowledge of child's life, etc. Future research on parent-child relationship quality could benefit from the use of multiple informants on assessing relationship quality. Further, observational methods could be employed by future researchers to extend the findings beyond self-report measures. An additional limitation was the sociodemographic risk of the sample as the results may not generalize to a more nationally representative sample. However, it is very important to continue to include participants from low-income backgrounds in order to diversify the current scholarship as low-income participants and participants of color have traditionally been left out of research literature.

Additionally, the sample had a very broad range of family structure types. We identified seven family structures that best represented the data but it is possible that there could be a number of additional types of family structure within each of the seven groups. For example, it was beyond the scope of the current study to investigate caregivers that did not live in the home and thus only caregivers living in the home were accounted for in the coding of family structure type. As Kellam (1977) also noted, there are many possible family structures that could have been created to categorize the sample; however, in order to be within a reasonable range to analyze the data we used only seven different family structures that best fit the data.

To further extend the findings of the current study, future research should investigate the mediating variables for the relationship between a positive-parent child relationship and adolescent externalizing problem behavior and other mechanisms by which family process and adolescent behavior are related. Further examination of the extrafamilial influences on adolescents' behavioral problems and how it affects the parent-child relationship are warranted as well.

Conclusion

In conclusion, the findings indicated that there were no significant relationships between varying family structures and adolescent externalizing problem behavior. However, we found that a positive parent-child relationship quality, independent of family structure, is associated with reduced risk for adolescent externalizing problem behavior. Overall, the results from the present study suggest that across a wide variety of family structures, a positive relationship between child and caregiver is more important for behavioral outcomes than who the caregivers are across time.

Study 2 – The Influence of Caregiver Depressive Symptoms and Romantic Satisfaction on Adolescent Behavior

Given the majority of primary caregivers in Study 1 had live-in romantic partners, we were interested in whether the caregiver's satisfaction in their romantic relationship, another family *process*, was related to child behavior and, if so, what were the mechanisms by which they were related. It is well established in the literature that couple relationship satisfaction and distress are related to child behavior (Linville et al., 2010). One hypothesized mechanism by which caregiver romantic satisfaction and child behavior are related is through the influence of caregiver mental health. Previous research suggests that marital satisfaction is significantly related to both mother and father depressive symptoms and to child psychological adjustment in early to middle childhood (Fishman et al., 2000; Henderson et al., 2003). Few studies to date have assessed the relationship between caregiver romantic satisfaction and caregiver depressive symptoms in children's late childhood and the impact on later adolescent problem behavior (Papp, Goeke-Morey & Cummings, 2004).

Further, parental depressive symptoms have been found to mediate the association between marital satisfaction and child problem behavior (Cummings et al., 2005). Interestingly, in a study by Emery and colleagues (1982), the results indicated that the relationship between having a parent with an affective disorder (e.g., unipolar depressed) and children's externalizing problem behavior in school is largely accounted for by concomitant marital discord. For families in which marital discord was not present, and the parents were presumably satisfied in their relationship, the children in the control group and the children with parents who had an affective disorder were at similar risk for exhibiting externalizing problem behaviors in school (Emery, Weintraub, & Neale, 1982).

The present study utilized a subset of data from a large (*N*=442) longitudinal study with low-income families from diverse racial and ethnic backgrounds with a variety of romantic partnerships, including married, cohabiting and dating relationships, to investigate primary caregiver depressive symptoms as a potential mediator for the association between caregiver romantic satisfaction and their children's externalizing problem behaviors in adolescence. In line with previous research summarized above, we hypothesized that primary caregiver depressive symptoms would mediate the association between caregiver romantic relationship satisfaction and adolescent externalizing problem behavior.

Methods

The present study utilized the same dataset as Study 1 for Study 2, The Early Steps Multisite Study. In order to ascertain the specific effects of romantic satisfaction in the transition from childhood to adolescence, a critical developmental transition, the present study used data from waves 7, 8 and 9 of the Early Steps Multisite Study. Families were selected for the current study from the larger full sample, if the primary caregiver reported having a romantic partner and participated at waves 7, 8 and 9 (see Table 15 for a description of demographics of the

subsample). For the mediation analysis, data from the 442 families who completed all questionnaires were analyzed.

Primary-caregiver romantic relationship satisfaction. Primary caregiver perceptions of the level of satisfaction with their current romantic relationship were assessed at each wave of the present study using four items that were derived from the 32-item Dyadic Adjustment Test (Spanier, 1976). The first three items, rated on a six-point Likert scale ranging from *never to all the time*, were as follows (1) How often did you discuss or have you considered divorce, separation, or terminating your relationship?, (2) In general, how often do you think that things between you and your partner are going well?, and (3) Do you confide in your mate?. Item four, "Which best describes your happiness in your relationship?" is rated on a seven-point scale, ranging from extremely unhappy to perfect. Compared with the 32-item version of the measure, the short four-item form predicted couple dissolution and was found to be less susceptible to social desirability of the respondent (Sabourin, Valois, & Lussier, 2005). Total scores across the two waves (target child ages 9.5 and 10.5) were used in this analysis.

Primary caregiver depressive symptoms. Primary caregivers completed the Center for Epidemiological Studies Depression Scale (CES-D) at each wave of the present study. Total scores across the two waves (target child ages 9.5 and 10.5) were used in this analysis. The CES-D Scale is a 20-item self-report scale designed to measure depressive symptomatology in the general population. Primary caregivers rated how often they felt each symptom during the past week on a four-point scale ranging from *rarely or none of the time* to *most or all of the time.* Sample items include "I had trouble keeping my mind on what I was doing" and "I had crying spells."

Target child externalizing problem behaviors. Primary caregivers completed the Child Behavior Checklist (CBCL) (Achenbach & Rescorla, 2001) at each wave of the study. The broad-band

Externalizing factor, which includes rule-breaking behaviors and aggressive behaviors, was used to evaluate the frequency of problem behavior over the past six months. Primary caregivers rated each item on a three-point scale: *not true (as far as you know), somewhat or sometimes true,* and *very true or often true.* Sample items include: "Doesn't seem to feel guilty after misbehaving" and "Cruelty, bullying, or meanness to others." Additionally, at age 14, the target children's teachers completed the teacher version of the CBCL. An average score for the primary-caregiver report and the teacher report was used to limit reporter bias.

Results

Descriptive statistics can be found in Table 16. In accordance with our hypothesis, primary caregivers' romantic satisfaction at target child age 9.5 and 10.5 significantly predicted target child externalizing problem behaviors at age 14, $F(1,441) = 8.207$, $p = .004$, $R^2 = .018$, such that greater romantic relationship satisfaction for primary caregivers was significantly related to fewer externalizing problem behaviors for adolescents. Also, in line with our hypotheses, primary caregiver depressive symptoms at target child age 9.5 and 10.5 significantly mediated the relationship between primary caregivers' romantic satisfaction and adolescent externalizing behaviors, $F(2,439) = 10.157$, $p < .001$, $R^2 = .044$ (see Figure 2). Specifically, primary caregivers' greater romantic relationship satisfaction was related to fewer depressive symptoms for primary caregivers, $\beta = -.371$, $p < .001$, and fewer depressive symptoms for primary caregivers was related to fewer externalizing problem behaviors for adolescents, $\beta = .197$, $p < .001$. Using Baron and Kenny (1986) mediation analysis steps, the direct path (c) between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behaviors was significant, $\beta = -.135$, $p = .004$, as was the a path from primary caregiver romantic relationship satisfaction to primary caregiver depressive symptoms, $\beta = -.371$, $p = <.001$, and the b path from primary caregiver depressive symptoms to adolescent externalizing

problem behaviors, $\beta = .197$, $p < .001$. Further, when primary caregiver depressive symptoms were controlled for in the c' path the association between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behaviors was no longer significant, $\beta = -.072$, $p = .153$. According to Baron and Kenny (1986), the pattern of results represents a full mediation.

Discussion

The current study addressed multiple gaps in the literature and expanded the findings of previous research to a population that has been historically marginalized and understudied in the research literature. In accordance with previous work (e.g., Fishman & Meyers, 2000; Linville et al., 2010), we found that primary caregiver romantic relationship satisfaction was significantly related to adolescent externalizing problem behavior. Extending previous work by Cummings et al. (2005) to the critical developmental time period of adolescence, we found that primary caregiver depressive symptoms in target children's late childhood significantly mediated the relationship between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behaviors.

The results from the current study suggest that primary caregivers with low romantic relationship satisfaction may be most at risk for experiencing higher levels of depressive symptoms and their children may be most at risk for exhibiting problematic externalizing behaviors in adolescence. However, it is important to consider the possibility of a bidirectional relationship such that primary caregivers experiencing high levels of depressive symptoms may be most at risk for low romantic relationship satisfaction. Future researchers should develop more methods to ascertain whether romantic relationship satisfaction and depressive symptoms interact in a bidirectional relationship and whether there is a meaningful pattern temporally for the effect of both variables on adolescent behavior.

Given that the results suggest that primary caregiver depressive symptoms explain the relationship between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behaviors, intervention techniques to reduce primary caregiver depressive symptoms may be an effective means to reduce risk for adolescent externalizing problem behaviors. Cognitive behavioral therapy has considerable research evidence to suggest that it is as effective as psychotropic medications (e.g., selective serotonin re-uptake inhibitors) in reducing depressive symptoms in adults (Butler, Chapman, Forman, & Beck, 2006; DeRubeis, Siegle, & Hollon, 2008; Dobson et al., 2008). Behavioral activation also has considerable evidence for efficacy in treating depression (Dimidjian et al., 2006). However, when both therapy and medication are combined there are generally more powerful results (Thase et al., 1997).

Alleviating primary caregiver depressive symptoms may have the added benefit of increasing relationship satisfaction (Butler et al., 2006). Previous research suggests that as depressive symptoms decrease one's ability to positively interact with their partner increases (Beach, Katz, Kim, & Brody, 2003). Couples therapy may also be an avenue for intervention to reduce depressive symptoms and increase relationship satisfaction concurrently (Fischer, Baucom, Hahlweg, & Epstein, 2014). Further, reducing depressive symptoms may give primary caregivers the energy and motivation to engage in positive parenting practices that are known to reduce risk for adolescent problem behavior such as monitoring, setting limits, positive behavior support and proactive parenting. Reducing primary caregiver depressive symptoms may also increase the quality of the parent-child relationship, which is considered a buffer for the risk for adolescent problem behavior (Krishnakumar & Buehler, 2000).

Identifying and understanding points of intervention to reduce problem behaviors and preventative techniques to offset risk for developing externalizing problem behaviors can have

many positive benefits for children across a variety of critical developmental domains (e.g., peer relationship functioning and academic outcomes) (Olson, Bates, Sandy, & Lanthier, 2000). Previous research suggests that exhibiting externalizing problem behaviors can set children on a trajectory for more severe behavior problems in late adolescence and early adulthood (Shaw et al., 1998).

The current study explored the relationship between primary caregiver relationship satisfaction and depressive symptoms at the critical transition in their child's life from late childhood to adolescence. A limitation to the current study is that the primary caregiver's depressive symptoms in other critical time periods in the child's life (e.g., early development in toddlerhood) were not accounted for in the present models. Longitudinal research that is able to track primary caregiver depressive symptoms prenatally through adolescence would help to tease apart the effects at each developmental time period.

While previous research focused on how married biological parents' romantic relationship satisfaction impacts child behavior (Amato, 2010), the current study expanded these findings to more diverse partnerships including cohabitating partners, single parents dating, and married non-biological parents. However, due to smaller sample size in some types of romantic relationships, comparisons across relationship type were underpowered for separate mediation analyses. Future work with larger samples of participants should compare the associations between romantic satisfaction, depressive symptoms and adolescent behavior problems across romantic relationship type to ascertain whether there are meaningful differences.

Finally, the results should be interpreted in light of the potential confounding effect of the genetic influence between biologically related primary caregivers and children. Given that 96 percent of primary caregivers at initial recruitment of the sample were biological mothers, the influence of genetic heritability of certain temperaments and behaviors should be acknowledged.

Future research should control for the influence of genes on risk for the development of problematic externalizing behaviors.

Conclusion

The current study investigated primary caregiver depressive symptoms in late childhood as a mediator for the association between primary caregiver romantic relationship satisfaction and their children's externalizing problem behavior at the critical developmental shift from late childhood to adolescence. Further, the present study extended previous work in the literature to include more diverse partnerships (e.g., cohabitating partners and single parents dating) and to include racially and ethnically diverse participants from low-income backgrounds. Future research should inquire deeper into the mechanisms by which couple satisfaction in romantic relationships impacts both parental psychological well-being and child adjustment. Investigating the relationship between primary caregiver romantic satisfaction, depressive symptoms, and adolescent behavior is crucial for understanding points of intervention in family functioning and child development. Clinicians and parents alike can greatly benefit from acknowledging the link between romantic satisfaction and depressive symptoms and its influence on risk for adolescent externalizing behaviors. Further, it is important to continue to investigate the influence of such variables in diverse forms of partnerships such as cohabiting relationships and single parents dating as these family structures have become more common in modern society.

Study 3 - The Influence of Caregiver Parenting Practices and Romantic Satisfaction on Adolescent Behavior

Parenting practices have also been proposed as a potential mechanism by which caregiver romantic satisfaction and child behavior are related (Cui & Conger, 2008). Schoppe-Sullivan and colleagues (2007), utilized structural equation models and found multiple dimensions of

parenting mediated relations between marital conflict and children's adjustment. There are a few different theories for how the relationship amongst parent-parent conflict, parenting practices and child behavior may manifest in the family context. Krishnakumar et al. (2003) suggest that perceived interparental conflict has the potential of serving as a model for conflictual behaviors incorrectly assumed to be appropriate by the children. Benson and colleagues (2008) propose that conflict experienced between partners has the ability of "spilling over" into several parenting dimensions that are then able to influence children's internalizing and externalizing problems. Additionally, children's attachment to their caregivers may be threatened and feelings of security in the parent-child relationship may be negatively influenced by parent-parent conflict, which can contribute to children's symptoms of psychological distress (Harold et. al., 2004). Interestingly, Schoppe-Sullivan et al. (2007) found that when including controls for earlier adjustment, the child's ability to regulate emotions and behavior, continued to mediate relations between marital conflict and change in children's symptoms of psychological distress over time.

Peris and colleagues (2008) results suggest that parents may also seek instrumental and emotional support from their children in adolescence when they are experiencing conflict in the parent-parent relationship. Parentification, children assuming developmentally inappropriate adult roles, is likely to occur when parents seek support from their children to cope with their psychological distress related to conflict in their romantic relationship (Peris et al., 2008). Taking on a developmentally inappropriate role in adolescence and having to manage the distress associated with seeing your parent in distress may increase risk for problematic internalizing and externalizing behaviors (Jurkovic, Thirkield, & Morrell, 2001; Peris et al., 2008).

The current study sought to address the gaps in the literature and extend previous work to more diverse forms of romantic partnerships and participants from marginalized racial and ethnic groups and low socioeconomic status. The current study addressed two aims. First, we

investigated whether primary caregiver romantic relationship satisfaction is related to adolescent externalizing problem behavior. Second, we examined primary caregiver level of engagement in positive parenting practices as a mediator in the association between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behavior. In accordance with previous research discussed above, we hypothesized that primary caregiver positive parenting practices would mediate the association between caregiver romantic relationship satisfaction and adolescent externalizing problem behavior.

Methods

The present study utilized the same dataset as Study 1 for Study 3, The Early Steps Multisite Study. In order to ascertain the specific effects of romantic satisfaction in the transition from childhood to adolescence, a critical developmental shift, the present study used data from waves 7, 8 and 9 of the Early Steps Multisite Study. Families were selected for the current study from the larger full sample, if the primary caregiver reported having a romantic partner and participated at waves 7, 8 and 9 (see Table 15 for a description of demographics of the subsample). For the mediation analysis, data from the 443 families who completed all questionnaires were analyzed.

Primary-caregiver romantic relationship satisfaction. Specifically, primary caregiver perceptions of the level of satisfaction with their current romantic relationship were assessed at each wave of the study using four items that were derived from the 32-item Dyadic Adjustment Test (Spanier, 1976). The first three items, rated on a six-point Likert scale ranging from *never to all the time*, were as follows (1) How often did you discuss or have you considered divorce, separation, or terminating your relationship?, (2) In general, how often do you think that things between you and your partner are going well?, and (3) Do you confide in your mate?. Item four, “Which best describes your happiness in your relationship?” is rated on a seven-point scale,

ranging from extremely unhappy to perfect. Compared with the 32-item version of the measure, the short four-item form predicted couple dissolution and was found to be less susceptible to social desirability of the respondent (Sabourin et al., 2005). Total scores across the two waves (target child ages 9.5 and 10.5) were used in this analysis.

Positive parenting practices. Primary caregivers completed the Parenting Youth and Adolescents (PARCA) measure at the ages 9.5 and 10.5 assessment. The PARCA is a 14-item self-report measure designed to assess perceived parental competence in four domains: supporting positive behavior, proactive parenting, limit setting and monitoring (McEachern et al., 2011). Parents are asked to rate how often they are able to do each item on a seven-point scale from *not at all* to *most of the time*. A sample item from the supporting positive behavior scale is "Reward your child when s/he did something well or showed a new skill?" and a sample item from the proactive parenting scale is "Prepare your child for a challenging situation (such as starting a new school or going into a stressful situation)?" Total scores across the two waves (target child ages 9.5 and 10.5) were used in this analysis.

Target child externalizing problem behaviors. Primary caregivers completed the Child Behavior Checklist (CBCL) (Achenbach & Rescorla, 2001) at each wave of the study. The broad-band Externalizing factor, which includes rule-breaking behaviors and aggressive behaviors, was used to evaluate the frequency of problem behavior over the past six months. Primary caregivers rated each item on a three-point scale: *not true (as far as you know), somewhat or sometimes true,* and *very true or often true.* Sample items include: "Doesn't seem to feel guilty after misbehaving" and "Cruelty, bullying, or meanness to others." Additionally, at age 14, the target children's teachers completed the teacher version of the CBCL. An average score for the primary-caregiver report and the teacher report was used to limit reporter bias.

Results

Descriptive statistics can be found in Table 17. As expected, primary caregiver romantic relationship satisfaction significantly predicted target child externalizing problem behaviors at age 14, $F(1,441) = 8.207$, $p = .004$, $R^2 = .018$, such that greater romantic relationship satisfaction for primary caregivers was significantly related to fewer externalizing problem behaviors for adolescents. Contrary to our hypothesis, primary caregiver's level of engagement in positive parenting practices at target child age 9.5 and 10.5 only partially mediated the association between caregiver romantic satisfaction and adolescent behavior, $F(2,440) = 12.917$, $p < .001$, $R^2 = .055$ (see Figure 3). Specifically, primary caregivers' greater romantic relationship satisfaction was related to more engagement in positive parenting practices, $\beta = .126$, $p = .005$, and higher levels of positive parenting practices was related to fewer externalizing problem behaviors for adolescents, $\beta = -.176$, $p < .001$. Using Baron and Kenny (1986) mediation analysis steps, the direct path (c) between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behaviors was significant, $\beta = -.135$, $p = .004$, as was the a path from primary caregiver romantic relationship satisfaction to positive parenting practices, $\beta = .126$, $p = .005$, and the b path from positive parenting practices to adolescent externalizing problem behaviors, $\beta = -.176$, $p < .001$. Further, when primary caregiver level of engagement in positive parenting practices was controlled for in the c' path the association between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behaviors, the significance level was reduced, $\beta = -.111$, $p = .018$. According to Baron and Kenny (1986), the pattern of results represents a partial mediation.

Discussion

The current study addressed limitations to the present literature by incorporating diverse romantic partnerships and including participants from historically marginalized groups. In accordance with previous work (e.g., Cui & Conger, 2008; Schoppe-Sullivan et al., 2007), we

found that primary caregivers' level of engagement in positive parenting practices in target children's late childhood partially mediated the association between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behaviors.

The results from the current study suggest that primary caregivers with low romantic relationship satisfaction may be most at risk for experiencing deficits in positive parenting practices and their children may be most at risk for exhibiting problematic externalizing behaviors in adolescence. The findings highlight the need for prevention and intervention techniques designed to facilitate positive dynamics within the family system. Previous research suggests that interventions designed to facilitate and increase the frequency of engagement in positive and proactive parenting strategies have the added benefit of reducing child externalizing problem behavior and may buffer the effects of family adversity on risk for externalizing problem behaviors (Pettit, Bates & Dodge, 1997).

Parents experiencing conflict and dissatisfaction in their romantic relationship may be less motivated or less able to engage in the positive parenting practices they would otherwise endorse. For instance, as described by Emery (1982), a caregiver may perceive a child's normative misbehavior as problematic externalizing behaviors that are an emotional response to the conflict the child witnesses between caregivers. The caregivers may then avoid using their typical discipline practices and thus may set limits that are inconsistent or confusing to the child, which may reinforce behavior patterns they were trying to prevent.

Although, it is necessary to consider the possibility of a bidirectional relationship such that primary caregivers having difficulty engaging in positive parenting practices and instead are utilizing harsh or coercive parenting practices may be most at risk for romantic relationship conflict as this may be indicative of poor use of emotion regulation strategies and an emotionally reactive style of responding to the child's behavior. Previous research suggests that parental self-

regulation is related to engagement in harsh parenting practices such that parents with more difficulty with self-regulation tend to be more likely to engage in harsh parenting practices (Deater-Deckard, Wang, Chen, & Bell, 2012). However, stressful or chaotic environments, often present when caregivers are in conflict in their romantic relationship, also tend exacerbate the risk for caregiver engagement in harsh parenting practices and risk for child problem behaviors (Coldwell, Pike & Dunn, 2006). Future researchers should develop more methods to ascertain whether romantic relationship satisfaction and parenting practices interact in a bidirectional relationship and whether there is a meaningful pattern temporally for the effect of both variables on adolescent behavior.

The parent's own upbringing and the parenting behaviors modeled for them as children may also influence both the parent-child dyad and the parent-parent dyad. If aggression, violence or coercive parenting practices were experienced in the parent's own childhood, they may be more likely to employ those tactics (Simons, Beaman, Conger & Chao, 1993). The current study is limited in that it did not assess the participating caregivers' own childhood experiences. Future work would greatly benefit from a more wholistic approach in controlling for the caregivers' own childhood experiences. Similarly, it would benefit future research to incorporate a genetic component in order to control for the possible confound of the heritability of aggression and violence and the influence of a gene-environment interaction for children being raised by aggressive parents (Barnes & Jacobs, 2013).

Conclusion

By incorporating diverse romantic partnerships and including participants from historically marginalized groups, the current study expounded upon findings from the current literature to be more inclusive of modern family contexts. In line with previous work (e.g., Cui & Conger, 2008; Schoppe-Sullivan et al., 2007), we found that primary caregivers' level of

engagement in positive parenting practices in target children's late childhood partially mediated the association between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behaviors. The findings highlight the need for prevention and intervention techniques designed to facilitate positive dynamics within the family system.

Study 4 - The Influence of Parent-child Relationship and Caregiver Romantic Satisfaction on Adolescent Behavior

Consistent with family process theory, another hypothesized mechanism by which primary caregiver romantic relationship satisfaction and child behavior may be related is through the quality of the parent-child relationship (Kouros, Papp, Goeke-Morey, & Cummings, 2014). It has been suggested by numerous researchers, that the triadic relationship (i.e., the two caregivers and the child), rather than the dyadic relationship (i.e., the two caregivers) may be most influential on healthy child development (Vuchinich, Emery, & Cassidy, 1988). How well the child gets along with the caregivers may directly influence the interactions between the two caregivers in a number of ways (Erel & Burman, 1995).

A positive parent-child relationship characterized by warmth, support and communication may make the overall family functioning more positive, which could act as a buffer in the caregiver-caregiver relationship by reducing the risk for disagreements about parenting practices (Kouros et al., 2014). An additional effect of a positive parent-child relationship may be that it could provide opportunities for positive feedback from the child, which could improve caregivers' confidence in their parenting abilities and have positive benefits in the caregiver-caregiver relationship (Jones & Prinz, 2005). A positive parent-child relationship may also be indicative of a healthy interaction style in close relationships more broadly (Jones & Prinz,

2005). Thus, the caregiver may possess the interpersonal effectiveness necessary to build and sustain a positive relationship with both their child and their romantic partner.

The current study sought to extend previous work (e.g., Kouros et al., 2014) to more diverse forms of romantic partnerships in a sample of racially and ethnically diverse families from low-income backgrounds. In line with previous research, we expected that positive parent-child relationship quality would act as a mediator for the association between primary caregiver romantic relationship satisfaction and target child externalizing problem behavior in adolescence.

Methods

The present study utilized the same dataset as Study 1 for Study 4, The Early Steps Multisite Study. In order to ascertain the specific effects of romantic satisfaction in the transition from childhood to adolescence, a critical developmental shift, the present study used data from waves 7, 8 and 9 of the Early Steps Multisite Study. Families were selected for the current study from the larger full sample, if the primary caregiver reported having a romantic partner and participated at waves 7, 8 and 9 (see Table 15 for a description of demographics of the subsample). For the mediation analysis, data from the 440 families who completed all questionnaires were analyzed.

Primary-caregiver romantic relationship satisfaction. Specifically, primary caregiver perceptions of the level of satisfaction with their current romantic relationship were assessed at each wave of the study using four items that were derived from the 32-item Dyadic Adjustment Test (Spanier, 1976). The first three items, rated on a six-point Likert scale ranging from *never to all the time*, were as follows (1) How often did you discuss or have you considered divorce, separation, or terminating your relationship?, (2) In general, how often do you think that things between you and your partner are going well?, and (3) Do you confide in your mate?. Item four, "Which best describes your happiness in your relationship?" is rated on a seven-point scale,

ranging from extremely unhappy to perfect. Compared with the 32-item version of the measure, the short four-item form predicted couple dissolution and was found to be less susceptible to social desirability of the respondent (Sabourin et al., 2005). Total scores across the two waves (target child ages 9.5 and 10.5) were used in this analysis.

Parent-child relationship quality. Primary caregivers completed the Adult Child Relationship Scale (ACRS) at the ages 9.5 and 10.5 assessment. The ACRS is a 15-item measure adapted from the Student-Teacher Relationship Scale (Pianta, Steinberg, & Rollins, 1995), which assesses quality of the parent–child relationship and yields two scales: the Positive Relationship subscale and the Conflict Relationship subscale. To determine if a positive parent–child relationship was related to adolescent externalizing problem behavior, the PC's score on the five-item Positive Relationship subscale summed across the three waves was used in the present study. A sample item from the Positive Relationship subscale is "If upset, this child seeks comfort from me." Responses were on a Likert scale of 0 (*Definitely not*) to 4 (*Definitely*). The positive relationship subscale is reversed scored such that higher scores indicate a lower quality relationship characterized by fewer incidences of warmth, communication and support and lower scores indicate a higher quality relationship characterized by higher levels of warmth, communication and support.

Target child externalizing problem behaviors. Primary caregivers completed the Child Behavior Checklist (CBCL) (Achenbach & Rescorla, 2001) at each wave of the study. The broad-band Externalizing factor, which includes rule-breaking behaviors and aggressive behaviors, was used to evaluate the frequency of problem behavior over the past six months. Primary caregivers rated each item on a three-point scale: *not true (as far as you know), somewhat or sometimes true,* and *very true or often true.* Sample items include: "Doesn't seem to feel guilty after misbehaving" and "Cruelty, bullying, or meanness to others." Additionally, at age 14, the target children's

teachers completed the teacher version of the CBCL. An average score for the primary-caregiver report and the teacher report was used to limit reporter bias.

Results

Descriptive statistics can be found in Table 18. As expected, primary caregiver romantic relationship satisfaction significantly predicted target child externalizing problem behaviors at age 14, $F(1,441) = 8.207$, $p = .004$, $R^2 = .018$, such that greater romantic relationship satisfaction for primary caregivers was significantly related to fewer externalizing problem behaviors for adolescents. In line with our hypothesis, the quality of parent-child relationship at target child age 9.5 and 10.5 mediated the association between caregiver romantic satisfaction and adolescent behavior, $F(2,437) = 15.460$, $p < .001$, $R^2 = .066$ (see Figure 4). Specifically, primary caregivers' greater romantic relationship satisfaction was related to a more positive parent-child relationship, characterized by higher levels of warmth, communication and support, $\beta = -.186$, $p < .001$, and higher quality parent-child relationship was related to fewer externalizing problem behaviors for adolescents, $\beta = .214$, $p < .001$. Using Baron and Kenny (1986) mediation analysis steps, the direct path (c) between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behaviors was significant, $\beta = -.135$, $p = .004$, as was the a path from primary caregiver romantic relationship satisfaction to parent-child relationship quality, $\beta = -.186$, $p = <.001$, and the b path from parent-child relationship quality to adolescent externalizing problem behaviors, $\beta = .214$, $p < .001$. Further, when parent-child relationship quality was controlled for in the c' path the association between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behaviors was no longer significant, $\beta = -.089$, $p = .059$. According to Baron and Kenny (1986), the pattern of results represents a full mediation.

Discussion

The current study contributes a unique investigation of the influence of multiple family processes (i.e., parent-parent relationship and parent-child relationship) on the development of externalizing problem behaviors in adolescence in a sample of primarily low-income families with diverse romantic partnerships. The results suggest that a positive parent-child relationship is able to explain the variance in the association between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behavior. The pattern of results is consistent with previous work by Kouros and colleagues (2014), who found that a positive parent-child relationship was able to buffer the risk for parent-parent conflict that has typically been associated with child externalizing problem behavior. Given that the extant literature has focused on married, biological parents from more advantaged sociodemographic backgrounds, the current study extends previous work to be more inclusive of historically marginalized groups in research.

Understanding the importance of the parent-child dynamic in the association between caregiver romantic relationship satisfaction and adolescent externalizing problem behavior is necessary for clinicians and parents intending to intervene upon or prevent problematic family dynamics that may increase risk for behavior problems. Family systems theory and related therapeutic techniques benefit from recognizing the parent-child relationship as a potential buffer or indirect means by which to affect change within the family (Kouros et al., 2014). A positive parent-child relationship may increase parenting self-efficacy (Jones and Prinz, 2005) and decrease risk for conflict between parents over child-rearing responsibilities or practices.

Parenting stress has been found to negatively impact caregiver romantic relationship satisfaction (Benzies, Harrison, & Magill-Evans, 2004). The stress may spillover into interactions with the child. Alternatively, parenting stress associated with managing adolescent externalizing problem behaviors may increase risk for parent-parent conflict, which may be

incorrectly assumed by the child to be normative interaction styles (Krishnakumar et al., 2003). Modeling problematic interaction styles may be one means by which the parent-parent relationship can negatively influence the parent-child relationship and the child's behavior.

However, it is critical to acknowledge the potential for a bidirectional or reciprocal relationship in which the parent-parent dynamic can influence the parent-child dynamic and vice versa. The current study was limited in that it was not able to definitively investigate temporally whether the positive parent-child relationship occurred first or whether the caregiver romantic relationship satisfaction was present at the onset of the parent-child relationship. Of course, relationships fluctuate and change over time so it is difficult to systematically test temporal associations. Future research would greatly benefit from more advanced techniques in capturing temporal associations.

Conclusion

The current study suggests that a positive parent-child relationship explains the variance in the association between primary caregiver romantic relationship satisfaction and adolescent externalizing problem behavior. Primary caregiver satisfaction in their romantic relationship and a parent-child relationship, characterized by warmth, support and communication, may reduce risk for adolescent externalizing behaviors. Recognizing the influence of the parent-child dynamic as well as the parent-parent dynamic is important for fostering healthy family dynamics. The findings highlight the importance of not just couples therapy but also family therapy as an intervention strategy in reducing risk for adolescent externalizing problem behaviors.

Overall, the present studies highlight the importance of supporting both the parent-child and parent-parent relationship, regardless of the family structure type, in reducing risk for adolescent externalizing problem behavior. The findings promote the utilization of both couples and family therapy in reducing family processes associated with child problem behavior.

Recognizing the associations between caregiver romantic satisfaction, caregiver depressive symptoms, positive parenting practices, parent-child relationship quality, and family structure with adolescent externalizing problem behavior is critical for parents, teachers and clinicians. Understanding possible causes and antecedents to problem behavior may reduce risk for further exacerbations of problems and may also prevent adolescents from being incorrectly labeled or misunderstood by the adults in their life (e.g., parents and teachers). Having greater understanding of why certain problem behaviors may have arisen will hopefully open the opportunity for more resources to be allocated to the child (e.g., therapy) or to the family to help facilitate and support positive youth development.

References

Achenbach, T. M., & Rescorla, L. (2001). ASEBA school-age forms & profiles.

Ackard, D. M., Neumark-Sztainer, D., Story, M., & Perry, C. (2006). Parent–child connectedness and behavioral and emotional health among adolescents. *American Journal of Preventive Medicine*, 30(1), 59-66.

Amato, P. R. (2010). Research on divorce: Continuing trends and new developments. *Journal of Marriage and Family*, 72(3), 650-666.

Amato, P. R. & Fowler, F. (2002). Parenting practices, child adjustment, and family diversity. *Journal of Marriage and Family*, 64: 703-716.

Barnes, J. C., & Jacobs, B. A. (2013). Genetic risk for violent behavior and environmental exposure to disadvantage and violent crime: The case for gene–environment interaction. *Journal of Interpersonal Violence*, *28*(1), 92-120.

Baron, R. M. & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173-1182.

Beach, S. R., Katz, J., Kim, S., & Brody, G. H. (2003). Prospective effects of marital satisfaction on depressive symptoms in established marriages: A dyadic model. *Journal of Social and Personal Relationships*, *20*(3), 355-371.

Benson, M. J., Buehler, C., & Gerard, J. M. (2008). Interparental hostility and early adolescent problem behavior: Spillover via maternal acceptance, harshness, inconsistency, and intrusiveness. *The Journal of Early Adolescence*, *28*(3), 428-454.

Benzies, K. M., Harrison, M. J., & Magill-Evans, J. (2004). Parenting stress, marital quality, and child behavior problems at age 7 years. *Public Health Nursing*, *21*(2), 111-121.

Berryhill, M.B. (2016). Mothers' parenting stress and engagement: mediating role of parental competence, *Marriage & Family Review,* 52:5, 461-480.

Bianchi, S. M., & Casper, L. M. 2000. American families. *Population Bulletin*, 55, 1 – 44.

Bronfenbrenner, U. (1979). Contexts of child rearing: Problems and prospects. *American Psychologist*, *34*(10), 844.

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, *22*(6), 723.

Brown, S. L. (2004). Family structure and child well-being: The significance of parental cohabitation. *Journal of Marriage and Family.* 66. 351-367.

Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: a review of meta-analyses. *Clinical Psychology Review*, *26*(1), 17-31.

Clark, K. E., & Ladd, G. W. (2000). Connectedness and autonomy support in parent–child relationships: Links to children's socioemotional orientation and peer relationships. *Developmental Psychology, 36*(4), 485-498.

Coldwell, J., Pike, A., & Dunn, J. (2006). Household chaos–links with parenting and child behaviour. *Journal of Child Psychology and Psychiatry*, *47*(11), 1116-1122.

Copeland, D. & Harbaugh, B. L. (2005). Differences in parenting stress between married and single first time mothers at six to eight weeks after birth. *Issues in Comprehensive Pediatric Nursing*, 28:3, 139-152.

Côté, J. E. (2009). Identity formation and self-development in adolescence. *Handbook of Adolescent Psychology*, *1*, 266-304.

Cui, M., & Conger, R. D. (2008). Parenting behavior as mediator and moderator of the association between marital problems and adolescent maladjustment. *Journal of Research on Adolescence,* 18(2), 261-284.

Cui, M., & Donnellan, M. B. (2009). Trajectories of conflict over raising adolescent children and marital satisfaction. *Journal of Marriage and Family*, *71*(3), 478-494.

Cummings, E. M. (1994). Marital conflict and children's functioning. *Social Development*, *3*(1), 16-36.

Cummings, E. M., Keller, P. S. & Davies, P. T. (2005). Towards a family process model of maternal and paternal depressive symptoms: exploring multiple relations with child and family functioning. *Journal of Child Psychology and Psychiatry*, 46, 479–489.

Deary, I. J., Strand, S., Smith, P., & Fernandes, C. (2007). Intelligence and educational achievement. *Intelligence, 35*(1), 13-21.

Deater-Deckard, K., Wang, Z., Chen, N., & Bell, M. A. (2012). Maternal executive function, harsh parenting, and child conduct problems. *Journal of Child Psychology and Psychiatry*, *53*(10), 1084-1091.

Demo, D. H., & Acock, A.C., (1996). Family structure, family process, and adolescent well-being. *Journal of Research on Adolescence*, 6, 457-488.

DeRubeis, R. J., Siegle, G. J., & Hollon, S. D. (2008). Cognitive therapy versus medication for depression: treatment outcomes and neural mechanisms. *Nature Reviews Neuroscience*, *9*(10), 788.

Dimidjian, S., Hollon, S. D., Dobson, K. S., Schmaling, K. B., Kohlenberg, R. J., Addis, M. E., & Jacobson, N. S. (2006). Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *Journal of Consulting and Clinical Psychology, 74*(4), 658-670.

Dishion, T. J., Shaw, D. S., Connell, A., Gardner, F., Weaver, C., & Wilson, M. (2008). The family check-up with high-risk indigent families: Outcomes of positive parenting and problem behavior from ages 2 through 4 years. *Child Development*, 79(5), 1395–1414.

Dobson, K. S., Hollon, S. D., Dimidjian, S., Schmaling, K. B., Kohlenberg, R. J., Gallop, R. J., & Jacobson, N. S. (2008). Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the prevention of relapse and recurrence in major depression. *Journal of Consulting and Clinical Psychology*, *76*(3), 468.

Dunifon, R., & Kowaleski-Jones, L. (2002). Who's in the house? Race differences in cohabitation, single parenthood, and child development. *Child Development, 73*, 1249–1264.

Easterbrooks, M. A., & Emde, R. M. (1988). Marital and parent–child relationships: The role of affect in the family system. In R. A. Hinde & J. Stevenson-Hinde (Eds.), *Relationships within families: Mutual influences* (p. 48-67). New York: Oxford University Press.

Emery, R. E. (1982). Interparental conflict and the children of discord and divorce. *Psychological Bulletin*, *92*(2), 310.

Emery, R., Weintraub, S., & Neale, J. M. (1982). Effects of marital discord on the school behavior of children of schizophrenic, affectively disordered, and normal parents. *Journal of Abnormal Child Psychology*, *10*(2), 215-228.

Erel, O., & Burman, B. (1995). Interrelatedness of marital relations and parent-child relations: a meta-analytic review. *Psychological Bulletin*, *118*(1), 108.

Farrell, A. D., & White, K. S. (1998). Peer influences and drug use among urban adolescents: Family structure and parent–adolescent relationship as protective factors. *Journal of Consulting and Clinical Psychology*, 66(2), 248-258.

Fischer, M.S., Baucom, D.H., Hahlweg, K., & Epstein, N.B. (2014). Couple therapy. In S.G. Hofman (Ed.), *The Wiley Handbook of Cognitive Behavioral Therapy* (pp. 703-725). New York: Wiley.

Fishman, E. A., & Meyers, S. A. (2000). Marital satisfaction and child adjustment: Direct and mediated pathways. *Contemporary Family Therapy*, *22*(4), 437-452.

Fuligni, A. J., & Eccles, J. S. (1993). Perceived parent-child relationships and early adolescents' orientation toward peers. *Developmental Psychology, 29*(4), 622-632.

Goldberg, J. S., & Carlson, M. J. (2014). Parents' relationship quality and children's behavior in stable married and cohabiting families. *Journal of Marriage and Family*, *76*(4), 762-777.

Goodman, S. H., & Gotlib, I. H. (1999). Risk for psychopathology in the children of depressed mothers: a developmental model for understanding mechanisms of transmission. *Psychological Review*, *106*(3), 458.

Goodman, S. H., Rouse, M. H., Connell, A. M., Broth, M. R., Hall, C. M., & Heyward, D. (2011). Maternal depression and child psychopathology: a meta-analytic review. *Clinical Child and Family Psychology Review*, *14*(1), 1-27.

Goodnight, J. A., D'Onofrio, B. M., Cherlin, A. J., Emery, R. E., Van Hulle, C. A., & Lahey, B. B. (2013). Effects of multiple maternal relationship transitions on offspring antisocial behavior in childhood and adolescence: A cousin-comparison analysis. *Journal of Abnormal Child Psychology*, 41(2), 185-198.

Gottman, J. M., & Katz, L. F. (1989). Effects of marital discord on young children's peer interaction and health. *Developmental Psychology*, *25*(3), 373.

Griffin, K. W., Botvin, G. J., Scheier, L. M., Diaz, T., & Miller, N. L. (2000). Parenting practices as predictors of substance use, delinquency, and aggression among urban minority youth: Moderating effects of family structure and gender. *Psychology of Addictive Behaviors, 14*(2), 174-184.

Harold, G. T., Shelton, K. H., Goeke-Morey, M. C., & Cummings, E. M. (2004). Marital conflict, child emotional security about family relationships and child adjustment. *Social Development*, *13*(3), 350-376.

Henderson, A. D., Sayger, T. V., & Horne, A. M. (2003). Mothers and sons: A look at the relationship between child behavior problems, marital satisfaction, maternal depression, and family cohesion. *The Family Journal*, *11*(1), 33-41.

Howes, P., & Markman, H. J. (1989). Marital quality and child functioning: A longitudinal investigation. *Child Development*, 1044-1051.

Jenkins, J., Simpson, A., Dunn, J., Rasbash, J. & O'Connor, T. G. (2005). Mutual influence of marital conflict and children's behavior problems: shared and nonshared family risks. *Child Development*, 76: 24-39.

Jones, T. L., & Prinz, R. J. (2005). Potential roles of parental self-efficacy in parent and child adjustment: A review. *Clinical Psychology Review*, *25*(3), 341-363.

Jurkovic, G. J., Thirkield, A., & Morrell, R. (2001). Parentification of adult children of divorce: A multidimensional analysis. *Journal of Youth and Adolescence*, *30*(2), 245-257.

Kellam, S. G., Ensminger, M. E., & Turner, R. J. (1977). Family structure and the mental health of children: Concurrent and longitudinal community-wide studies. *Archives of General Psychiatry*, 34(9), 1012-1022.

Kennedy, S., & Bumpass, L. (2008). Cohabitation and children's living arrangements: New estimates from the United States. *Demographic Research*, *19*, 1663.

Ketsetzis, M., Ryan, B. A., & Adams, G. R. (1998). Family processes, parent-child interactions, and child characteristics influencing school-based social adjustment. *Journal of Marriage and the Family*, 374-387.

Kouros, C. D., Papp, L. M., Goeke-Morey, M. C., & Cummings, E. M. (2014). Spillover between marital quality and parent–child relationship quality: Parental depressive symptoms as moderators. *Journal of Family Psychology*, *28*(3), 315.

Krishnakumar, A., & Buehler, C. (2000). Interparental conflict and parenting behaviors: A meta-analytic review. *Family Relations*, *49*(1), 25-44.

Krishnakumar, A., Buehler, C., & Barber, B. K. (2003). Youth perceptions of interparental conflict, ineffective parenting, and youth problem behaviors in European-American and African-American families. *Journal of Social and Personal Relationships*, *20*(2), 239-260.

Linville, D., Chronister, K., Dishion, T., Todahl, J., Miller, J., Shaw, D., & Wilson, M. (2010). A longitudinal analysis of parenting practices, couple satisfaction, and child behavior problems. *Journal of Marital and Family Therapy*, *36*(2), 244-255.

Magnuson, K. & Berger, L. M. (2009). Family structure states and transitions: associations with children's well-being during middle childhood. *Journal of Marriage and Family,* 71: 575-591.

Manning, W. D., & Lamb, K. (2003). Parental cohabitation and adolescent well-being. *Journal of Marriage and Family*, 65, 876-893.

Martinez, C. R., Jr., & Forgatch, M. S. (2002). Adjusting to change: Linking family structure transitions with parenting and boys' adjustment. *Journal of Family Psychology, 16*(2), 107-117.

McEachern, A.D., Dishion T.D., Weaver, C.M., Shaw, D.S., Wilson, M N. & Gardner, F. (2011). Parenting Young Children (PARYC): Validation of a self-report parenting measure. *Journal of Child and Family Studies*, 1-14.

McLanahan, S. S. (1999). Father absence and the welfare of children. In E. M. Hetherington (Ed.), *Coping with divorce, single parenting, and remarriage: A risk and resiliency perspective* (p. 117-145). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Montgomery, M. J., & Anderson, E. R. (1992). Patterns of courtship for remarriage: Implications for child adjustment and parent-child relationships. *Journal of Marriage and Family*, *54*(3), 686.

Morrison, D. R. (1998). Child well-being in step-families and cohabiting unions following divorce: A dynamic appraisal. Paper presented at the annual meeting of the Population Association of America, Chicago, IL.

Morrison, E. F., Rimm-Kauffman, S., & Pianta, R. C. (2003). A longitudinal study of mother–child interactions at school entry and social and academic outcomes in middle school. *Journal of School Psychology*, *41*(3), 185-200.

Nuttall, E. V., & Nuttall, R. L. (1976). Parent-child relationships and effective academic motivation. *The Journal of Psychology*, *94*(1), 127-133.

O'Donnell, D. A., Schwab–Stone, M. E., & Muyeed, A. Z. (2002). Multidimensional resilience in urban children exposed to community violence. *Child Development*, *73*(4), 1265-1282.

Olson, S. L., Bates, J. E., Sandy, J. M., & Lanthier, R. (2000). Early developmental precursors of externalizing behavior in middle childhood and adolescence. *Journal of Abnormal Child Psychology*, *28*(2), 119-133.

Papp, L. M., Goeke-Morey, M. C., & Cummings, E. M. (2004). Mothers' and fathers' psychological symptoms and marital functioning: Examination of direct and interactive links with child adjustment. *Journal of Child and Family Studies*, *13*(4), 469-482.

Pettit, G. S., Bates, J. E., & Dodge, K. A. (1997). Supportive parenting, ecological context, and children's adjustment: A seven-year longitudinal study. *Child Development*, 68, 908–923.

Pianta, R. C., Steinberg, M. S., & Rollins, K. B. (1995). The first two years of school: Teacher-child relationships and deflections in children's classroom adjustment. *Development and Psychopathology*, 7, 295–312.

Quamma, J. P., & Greenberg, M. T. (1994). Children's experience of life stress: The role of family social support and social problem-solving skills as protective factors. *Journal of Clinical Child Psychology*, *23*(3), 295-305.

Sabourin, S., Valois, P., & Lussier, Y. (2005). Development and validation of a brief version of the dyadic adjustment scale with a nonparametric item analysis model. *Psychological Assessment*, *17*(1), 15.

Sarsour, K., Sheridan, M., Jutte, D., Nuru-Jeter, A., Hinshaw, S., & Boyce, W. T. (2011). Family socioeconomic status and child executive functions: The roles of language, home environment, and single parenthood. *Journal of the International Neuropsychological Society*, *17*(1), 120-132.

Savell, S. M., Womack, S. R., Wilson, M. N., Shaw, D. S., & Dishion, T. J. (2018). Considering the role of early discrimination experiences and the parent–child relationship in the development of disruptive behaviors in adolescence. *Infant Mental Health Journal*, *40*(1), 98-112.

Schoppe, S. J., Mangelsdorf, S. C., & Frosch, C. A. (2001). Coparenting, family process, and family structure: Implications for preschoolers' externalizing behavior problems. *Journal of Family Psychology, 15*(3), 526-545.

Schoppe-Sullivan, S. J., Schermerhorn, A. C., & Cummings, E. M. (2007). Marital conflict and children's adjustment: Evaluation of the parenting process model. *Journal of Marriage and Family*, *69*(5), 1118-1134.

Shaw, D. S. (1991). The effects of divorce on children's adjustment: Review and implications. *Behavior Modification,* 15(4), 456–485.

Shaw, D. S., Winslow, E. B., Owens, E. B., Vondra, J. I., Cohn, J. F., & Bell, R. Q. (1998). The development of early externalizing problems among children from low-income families: A transformational perspective. *Journal of Abnormal Child Psychology*, *26*, 95–107.

Simons, R. L., Beaman, J., Conger, R. D., & Chao, W. (1993). Childhood experience, conceptions of parenting, and attitudes of spouse as determinants of parental behavior. *Journal of Marriage and the Family*, 91-106.

Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family*, 15-28.

Strohschein, L. (2005). Parental divorce and child mental health trajectories. *Journal of Marriage and Family*, *67*(5), 1286-1300.

Sullivan, T. N., Kung, E. M., & Farrell, A. D. (2004). Relation between witnessing violence and drug use initiation among rural adolescents: Parental monitoring and family support as protective factors. *Journal of Clinical Child and Adolescent Psychology*, *33*(3), 488-498.

Thase, M. E., Greenhouse, J. B., Frank, E., Reynolds, C. F., Pilkonis, P. A., Hurley, K., & Kupfer, D. J. (1997). Treatment of major depression with psychotherapy or psychotherapy-pharmacotherapy combinations. *Archives of General Psychiatry*, *54*(11), 1009-1015.

Vuchinich, S., Emery, R. E., & Cassidy, J. (1988). Family members as third parties in dyadic family conflict: Strategies, alliances, and outcomes. *Child Development*, 1293-1302.

U.S. Bureau of the Census. (2001). *2000 Census of population and housing, United States*. Profiles of General Demographic Characteristics.

Walsh, F. (Ed.). (1982). *Normal family processes*. New York: Guilford Press.

Acknowledgements

Support for this research was provided by the National Institute on Drug Abuse (R01 DA023245, R01 DA022773). We also wish to extend our appreciation to the staff and research participants of the Early Steps Multisite Study.

Table 1
Family Composition 1 Descriptive Statistics of Categorical Measures

	N	%
Intervention Status		
Treatment Group	88	47.8
Control Group	96	52.2
Child Gender		
Male	96	52.2
Female	88	47.8
Site Location		
Charlottesville, VA	43	23.4
Eugene, OR	91	49.5
Pittsburgh, PA	50	27.2
Contact with child protective services		
Yes	10	5.4
No	135	73.4
PC Education Level (Age 14)		
7th or less	6	3.3
Junior High Completed	4	2.2
Partial High School	9	4.9
High School Graduate/GED	47	25.5
Partial College	30	16.3
Specialized Training	8	4.3
Junior college /Associates	30	16.3
Standard college/graduation	11	6.0
Graduate professional training	1	.5

Table 2
Family Composition 2 Descriptive Statistics of Categorical Measures

	N	%
Intervention Status		
Treatment Group	17	50
Control Group	17	50
Child Gender		
Male	17	50
Female	17	50
Site Location		
Charlottesville, VA	6	17.6
Eugene, OR	18	52.9
Pittsburgh, PA	10	29.4
Contact with child services		
Yes	2	5.9
No	32	94.1
PC Education Level (Age 14)		
7th or less	2	5.9
Partial High School	1	2.9
High School Graduate/GED	10	29.4
Partial College	6	17.6
Specialized Training	4	11.8
Junior/Associates	8	23.5
Standard college/graduation	1	2.9
Graduate/Professional training	2	5.9

Table 3
Family Composition 3 Descriptive Statistics of Categorical Measures

	N	%
Intervention Status		
Treatment Group	85	50.6
Control Group	83	49.4
Child Gender		
Male	82	48.8
Female	86	51.2
Site Location		
Charlottesville, VA	44	26.2
Eugene, OR	46	27.4
Pittsburgh, PA	78	46.4
Contact with child services		
Yes	14	8.3
No	126	75.0
PC Education Level (Age 14)		
7th or less	1	.6
Junior High completed	1	.6
Partial High School	19	11.3
High School Graduate/GED	41	24.4
Partial College	29	17.3
Specialized Training	10	6.0
Junior/Associates	28	16.7
Standard college/graduation	6	3.6
Graduate/Professional training	5	3.0

Table 4
Family Composition 4 Descriptive Statistics of Categorical Measures

	N	%
Intervention Status		
Treatment Group	11	36.7
Control Group	19	63.3
Child Gender		
Male	16	53.3
Female	14	46.7
Site Location		
Charlottesville, VA	7	23.3
Eugene, OR	9	30.0
Pittsburgh, PA	14	46.7
Contact with child services		
Yes	1	3.3
No	12	40.0
PC Education Level (Age 14)		
7th or less	1	3.3
Junior High completed	0	0
Partial High School	0	0
High School Graduate/GED	2	6.7
Partial College	2	6.7
Specialized Training	4	13.3
Junior/Associates	4	13.3
Standard college/graduation	0	0
Graduate/Professional training	0	0

Table 5
Family Composition 5 Descriptive Statistics of Categorical Measures

	N	%
Intervention Status		
Treatment Group	56	51.9
Control Group	52	48.1
Child Gender		
Male	52	48.1
Female	56	51.9
Site Location		
Charlottesville, VA	33	30.6
Eugene, OR	34	31.5
Pittsburgh, PA	41	38.0
Contact with child services		
Yes	7	6.5
No	83	76.9
PC Education Level (Age 14)		
7th or less	1	.9
Junior High completed	1	.9
Partial High School	10	9.3
High School Graduate/GED	26	24.1
Partial College	15	13.9
Specialized Training	5	4.6
Junior/Associates	23	21.3
Standard college/graduation	6	5.6
Graduate/Professional training	3	2.8

Table 6
Family Composition 6 Descriptive Statistics of Categorical Measures

	N	%
Intervention Status		
Treatment Group	17	50
Control Group	17	50
Child Gender		
Male	17	50
Female	17	50
Site Location		
Charlottesville, VA	6	17.6
Eugene, OR	18	52.9
Pittsburgh, PA	10	29.4
Contact with child services		
Yes	11	11.7
No	67	71.3
PC Education Level (Age 14)		
7th or less	4	4.3
Junior High completed	0	0
Partial High School	12	12.8
High School Graduate/GED	20	21.3
Partial College	13	13.8
Specialized Training	4	4.3
Junior/Associates	15	16.0
Standard college/graduation	9	9.6
Graduate/Professional training	1	1.1

Table 7
Family Composition 7 Descriptive Statistics of Categorical Measures

	N	%
Intervention Status		
Treatment Group	48	50
Control Group	48	50
Child Gender		
Male	53	55.2
Female	43	44.8
Site Location		
Charlottesville, VA	30	31.3
Eugene, OR	37	38.5
Pittsburgh, PA	29	30.2
Contact with child services		
Yes	8	8.3
No	65	67.7
PC Education Level (Age 14)		
7th or less	0	0
Junior High completed	3	3.1
Partial High School	9	9.4
High School Graduate/GED	24	25.0
Partial College	20	20.8
Specialized Training	6	6.3
Junior/Associates	6	6.3
Standard college/graduation	3	3.1
Graduate/Professional training	3	3.1

Table 8
Family Composition 1 (N=184) Descriptive Statistics of Continuous Measures

	Mean	(*SD*)	Range	Missing
Annual Family Income (Age 14)	$45,268.93	$23,694.57	$0-140,000	43
TC Externalizing Problem Behaviors (Age 14)	52.88	8.69	34.00-84.0	39
Positive Parent-Child Relationship (Age 14)	33.66	9.20	20.00-59.00	44

Note. Positive parent-child relationship is reversed coded such that lower scores indicate a more positive relationship characterized by higher levels of warmth, communication and support and higher scores indicate a less positive relationship characterized by lower levels of warmth, communication and support.

Table 9
Family Composition 2 (N = 34) Descriptive Statistics of Continuous Measures

	Mean	(*SD*)	Range	Missing
Annual Family Income (Age 14)	$24,802.47	$17,323.40	$0-140,000	0
TC Externalizing Problem Behaviors (Age 14)	52.37	8.88	34.00-85.0	4
Positive Parent-Child Relationship (Age 14)	34.02	8.63	21.00-57.00	5

Note. Positive parent-child relationship is reversed coded such that lower scores indicate a more positive relationship characterized by higher levels of warmth, communication and support and higher scores indicate a less positive relationship characterized by lower levels of warmth, communication and support.

Table 10
Family Composition 3 (N = 168) Descriptive Statistics of Continuous Measures

	Mean	(*SD*)	Range	Missing
Annual Family Income (Age 14)	$32,452.48	$18,576.64	$0-140,000	30
TC Externalizing Problem Behaviors (Age 14)	55.19	10.01	34-85.0	28
Positive Parent-Child Relationship (Age 14)	34.12	9.93	21-69	51

Note. Positive parent-child relationship is reversed coded such that lower scores indicate a more positive relationship characterized by higher levels of warmth, communication and support and higher scores indicate a less positive relationship characterized by lower levels of warmth, communication and support.

Table 11
Family Composition 4 (N = 30) Descriptive Statistics of Continuous Measures

	Mean	(*SD*)	Range	Missing
Annual Family Income (Age 14)	$15,510.00	$7,503.54	$0-140,000	18
TC Externalizing Problem Behaviors (Age 14)	54.64	10.57	34.00-85.0	16
Positive Parent-Child Relationship (Age 14)	26.5	6.50	20-40	22

Note. Positive parent-child relationship is reversed coded such that lower scores indicate a more positive relationship characterized by higher levels of warmth, communication and support and higher scores indicate a less positive relationship characterized by lower levels of warmth, communication and support.

Table 12
Family Composition 5 (N = 108) Descriptive Statistics of Continuous Measures

	Mean	(*SD*)	Range	Missing
Annual Family Income (Age 14)	$30,531.16	$19,981.72	$0-140,000	21
TC Externalizing Problem Behaviors (Age 14)	53.89	9.90	34.00-85.0	24
Positive Parent-Child Relationship (Age 14)	31.73	7.67	20-63	42

Note. Positive parent-child relationship is reversed coded such that lower scores indicate a more positive relationship characterized by higher levels of warmth, communication and support and higher scores indicate a less positive relationship characterized by lower levels of warmth, communication and support.

Table 13
Family Composition 6 (N = 94) Descriptive Statistics of Continuous Measures

	Mean	(*SD*)	Range	Missing
Annual Family Income (Age 14)	$33,125.26	$21,107.60	$0-140,000	18
TC Externalizing Problem Behaviors (Age 14)	57.30	9.75	34.00-85	20
Positive Parent-Child Relationship (Age 14)	33.51	11.19	20-68	35

Note. Positive parent-child relationship is reversed coded such that lower scores indicate a more positive relationship characterized by higher levels of warmth, communication and support and higher scores indicate a less positive relationship characterized by lower levels of warmth, communication and support.

Table 14
Family Composition 7 (N = 96) Descriptive Statistics of Continuous Measures

	Mean	(*SD*)	Range	Missing
Annual Family Income (Age 14)	$37,861.86	$25,142.96	$0-140,000	25
TC Externalizing Problem Behaviors (Age 14)	54.64	8.87	34.00-85.0	23
Positive Parent-Child Relationship (Age 14)	34.74	9.42	21-69	44

Note. Positive parent-child relationship is reversed coded such that lower scores indicate a more positive relationship characterized by higher levels of warmth, communication and support and higher scores indicate a less positive relationship characterized by lower levels of warmth, communication and support.

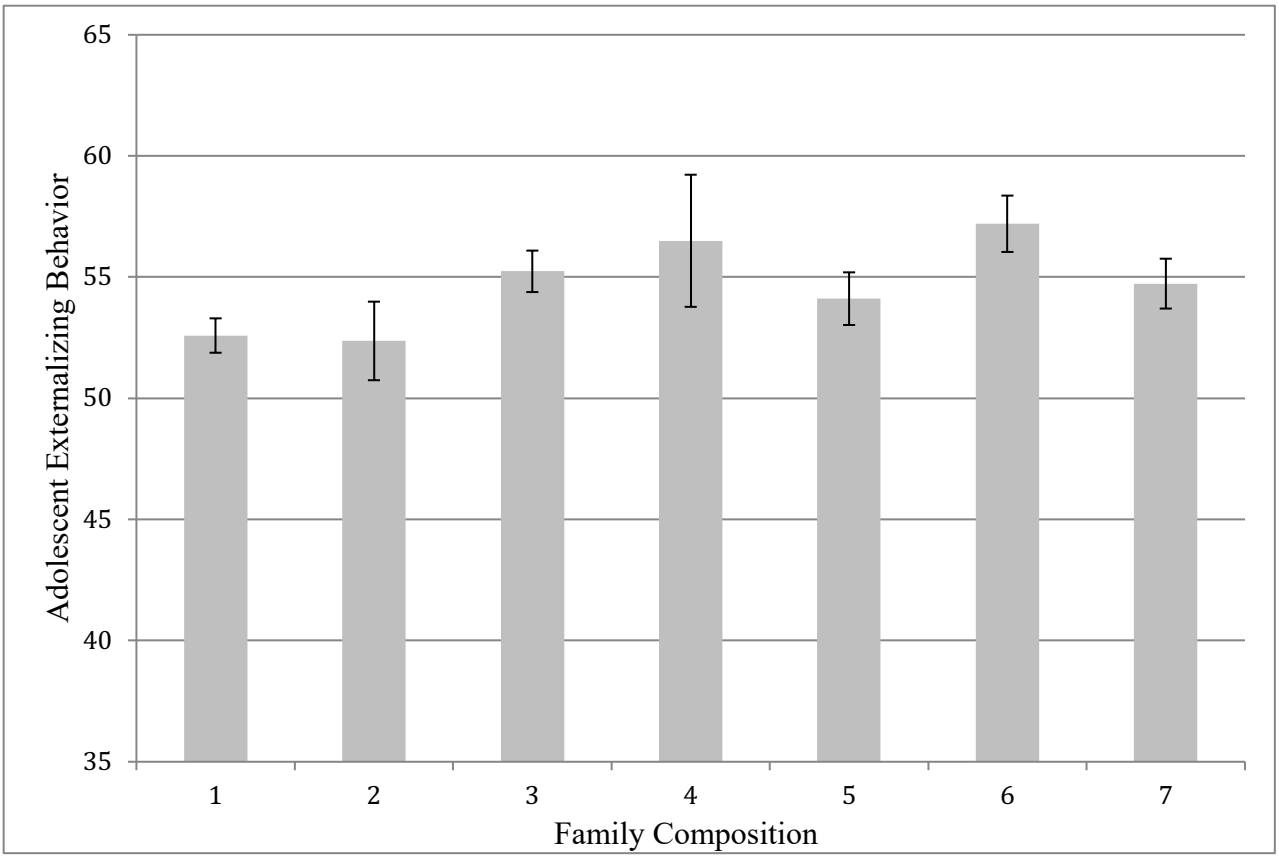

Figure 1. Adolescent externalizing behavior across seven family compositions.

Table 15
Sample Demographics for Families Participating at Waves 7, 8 and 9 of the Early Steps Multisite Study

	N	%
Intervention Status		
Treatment Group	229	48.5%
Control Group	243	51.5%
Child Gender		
Male	235	50.8%
Female	225	48.7%
Transgender	2	.4%
Primary Caregiver Gender		
Male	20	4.2%
Female	451	95.8%
Primary Caregiver Relationship to Target Child		
Biological Parent	448	94.9%
Other Relative	24	5%
Primary Caregiver Education Level		
Partial High School or Less	72	15.3%
High School or GED	138	29.3%
Partial College	119	25.3%
Associate's degree or Specialized Training	115	24.4%
4 Years of College or More	27	6%
Site Location		
Charlottesville, VA	111	23.5%
Eugene, OR	170	36.0%
Pittsburgh, PA	191	40.5%

Table 16
Study 2 Descriptive Statistics of Continuous Measures

	Mean	(*SD*)	Range	Missing
TC Externalizing Problem Behaviors (TC Age 14)	54.26	9.37	34.00-84.00	121
PC Romantic Relationship Satisfaction (TC Age 9.5 & 10.5)	33.48	6.71	9.00-44.00	62
PC Depressive Symptoms (TC Age 9.5 & 10.5)	12.81	10.03	.00-51.00	168

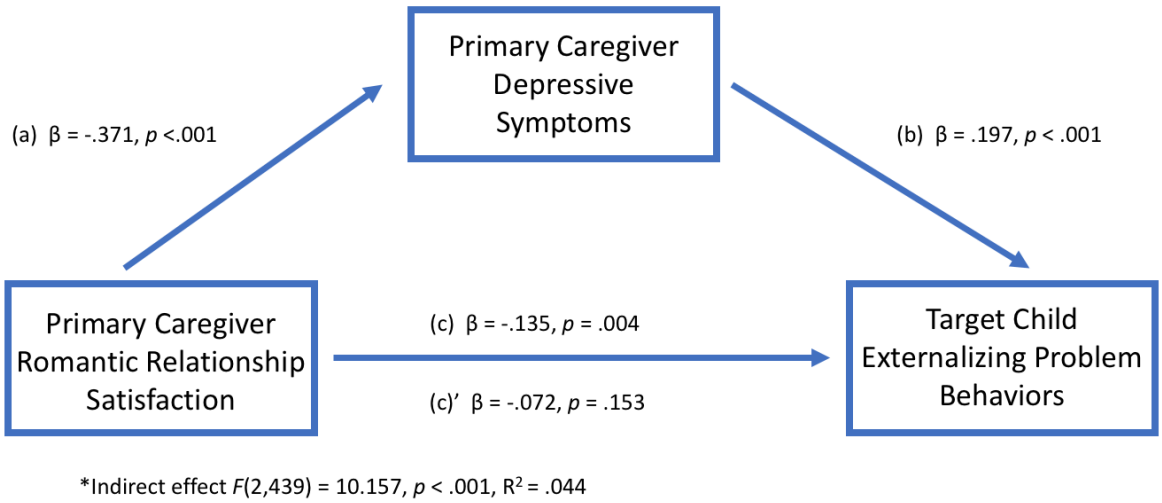

Figure 2. Mediation analysis of primary caregiver relationship satisfaction, primary caregiver depressive symptoms, and adolescent externalizing behaviors.

Table 17
Study 3 Descriptive Statistics of Continuous Measures

	Mean	(*SD*)	Range	Missing
TC Externalizing Problem Behaviors (TC Age 14)	54.27	9.36	34.00-84.00	120
PC Romantic Relationship Satisfaction (TC Age 9.5 & 10.5)	33.50	6.71	9.00-44.00	61
PC Positive Parenting Practices (TC Age 9.5 & 10.5)	44.59	5.59	24.79-56.00	168

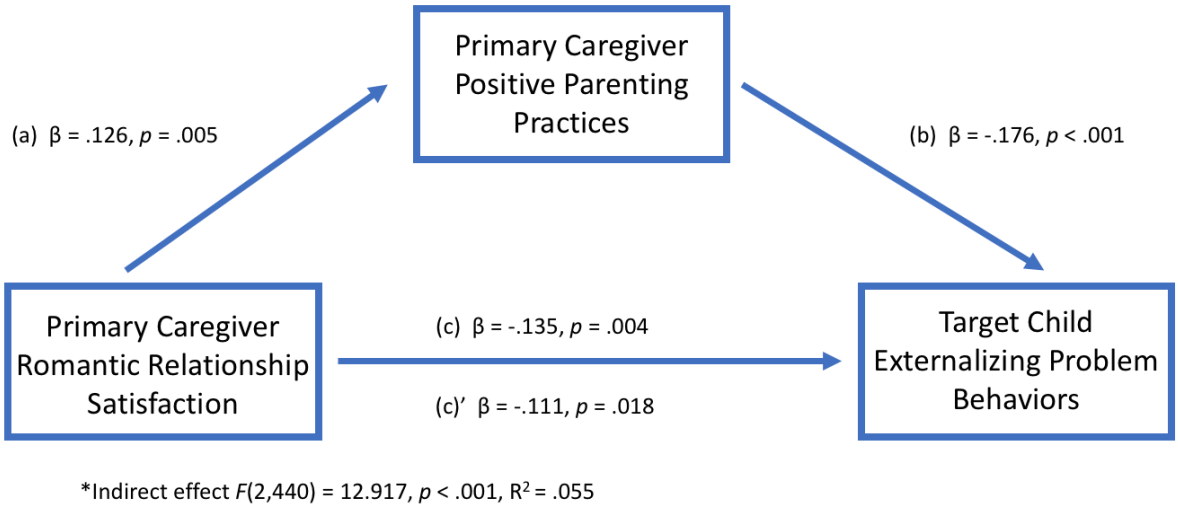

Figure 3. Mediation analysis of primary caregiver relationship satisfaction, primary caregiver positive parenting practices, and adolescent externalizing behaviors.

Table 18
Study 4 Descriptive Statistics of Continuous Measures

	Mean	(*SD*)	Range	Missing
TC Externalizing Problem Behaviors (TC Age 14)	54.29	9.39	34.00-84.00	123
PC Romantic Relationship Satisfaction (TC Age 9.5 & 10.5)	33.50	6.71	9.00-44.00	64
Parent-child Relationship Quality (TC Age 9.5 & 10.5)	16.98	6.09	10.00-42.00	167

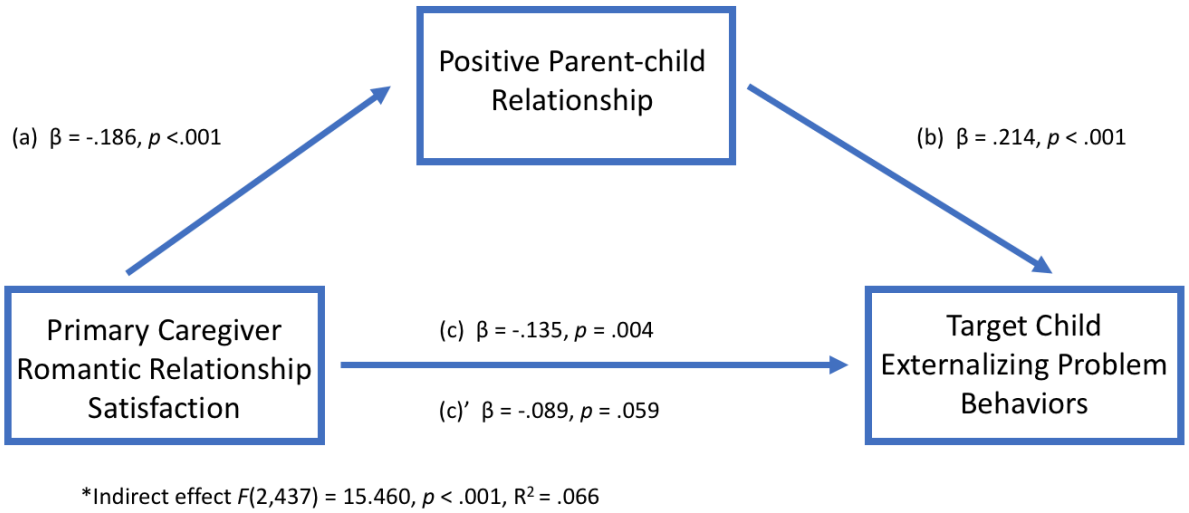

Figure 4. Mediation analysis of primary caregiver relationship satisfaction, parent-child relationship quality, and adolescent externalizing behaviors.